



# Mac mini Model A1283 Teardown

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## INTRODUCTION

We picked up the new Mac mini from our local Apple store and took it apart!

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### TOOLS:

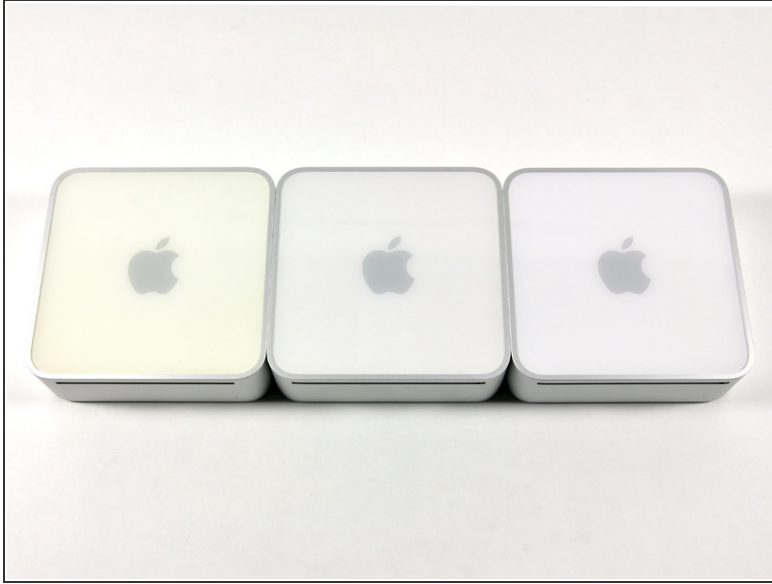
- [1.5" Thin Putty Knife](#) (1)
  - [Phillips #0 Screwdriver](#) (1)
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## Step 1 — Teardown



- The Mac mini for this First Look was graciously provided by our friends at [macminicolo](#), a Mac mini colocation service. They allow your Mac mini to be used as a surprisingly powerful and inexpensive server.
- Ladies and gentlemen, without further ado, allow us to introduce the new and improved Mac mini!
- We immediately tried to open the mini using our [iMac opening tool](#), used in yesterday's [iMac First Look](#).
  - It did not work.
- ⓘ We also posted a guide for installing a [second hard drive in the Mac Mini](#).

## Step 2



- The beauty of evolution at its finest. From left to right: Power PC, Intel Core Duo, Intel Core 2 Duo.
- Notable differences in the latest model:
  - ① An additional USB port brings the total to five, one more than the previous model (and three more than the Power PC!).
  - ① A Mini DisplayPort and mini-DVI port -- which allow for Dual-Monitor support for the first time in a Mac mini -- replace the DVI display port of the previous generation.
  - ① A Firewire 800 port replaced the old FireWire 400 port, much to the chagrin of Mac users.



## Step 3



- Let's rock this thing!
- Carefully insert a putty knife into the crevice in between the top cover and bottom housing. Start on the left side first.
- Gently enlarge the existing crevice by twisting the putty knife downward and away from the mini.
- Repeat the prying motion until a portion of the bottom housing has been nudged upward.

## Step 4



- Repeat the same prying procedure on the right side.
- The top cover should now be marginally separated from the bottom housing. Use your fingers to completely separate the two, starting with the I/O side of the mini.
- The top cover does not have any cables attaching it to the bottom housing; it should now be completely detached from the bottom.

## Step 5



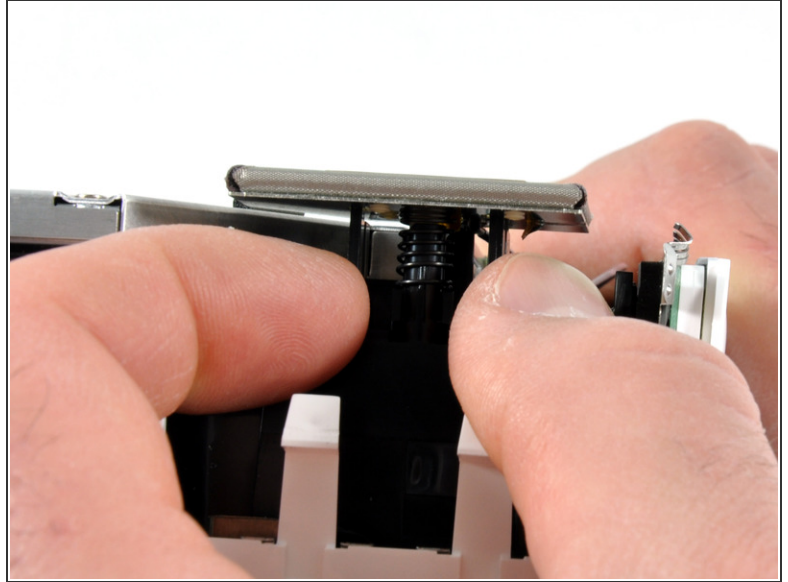
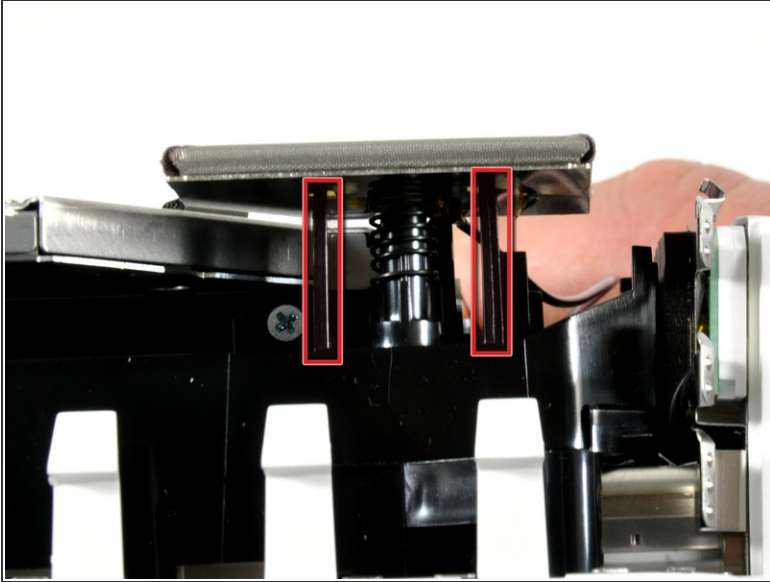
- A quick comparison photo of the three Mac mini generations (oldest on left) showcases their technological progression:
  - No antennas --> One antenna --> Two antennas (Airport card)
  - Desktop RAM --> laptop RAM
  - PATA --> SATA drives

## Step 6



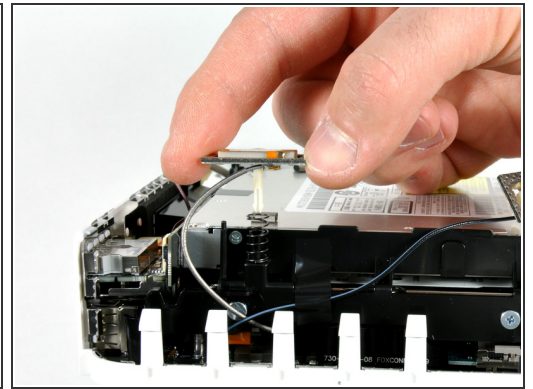
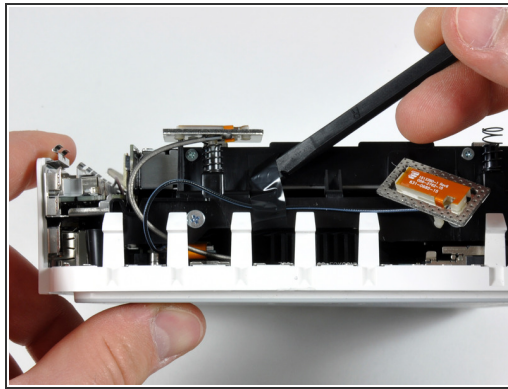
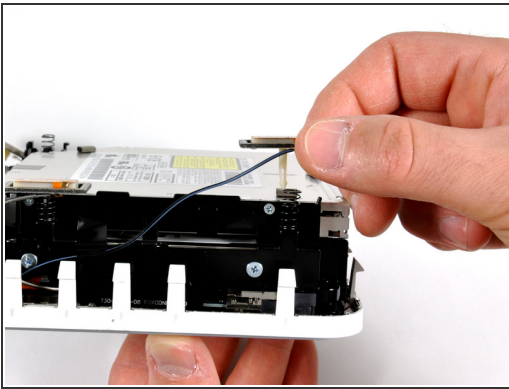
- Can you hear me now? Excellent.
- The wireless board contains a Broadcom BCM4312KFBGH WiFi transceiver on it.
- The new mini houses three wireless communications antennas, one for use with the built-in Bluetooth and two for the Airport Extreme wireless 802.11n card.
- All three antennas need to be removed before accessing the hardware underneath.

## Step 7



- There are two black posts securing the Airport antenna board to the internal frame.
- Squeeze both black posts together and gently lift the antenna board from the post.

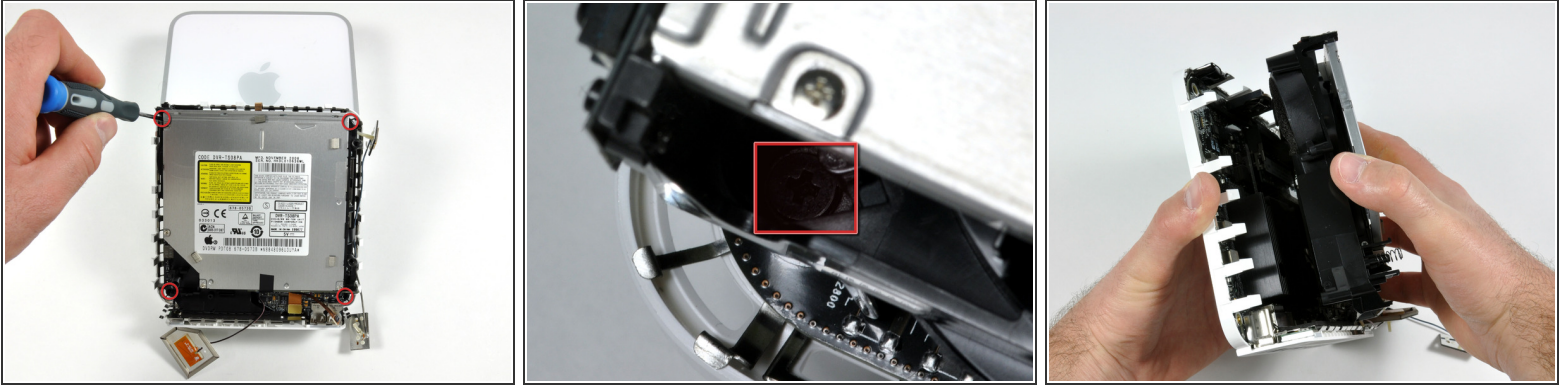
## Step 8



- Rotate the mini 180 degrees.
- Use a spudger to peel back the black tape and release the antenna cable.
- Carefully lift the remaining two antennas from the right side of the mini.

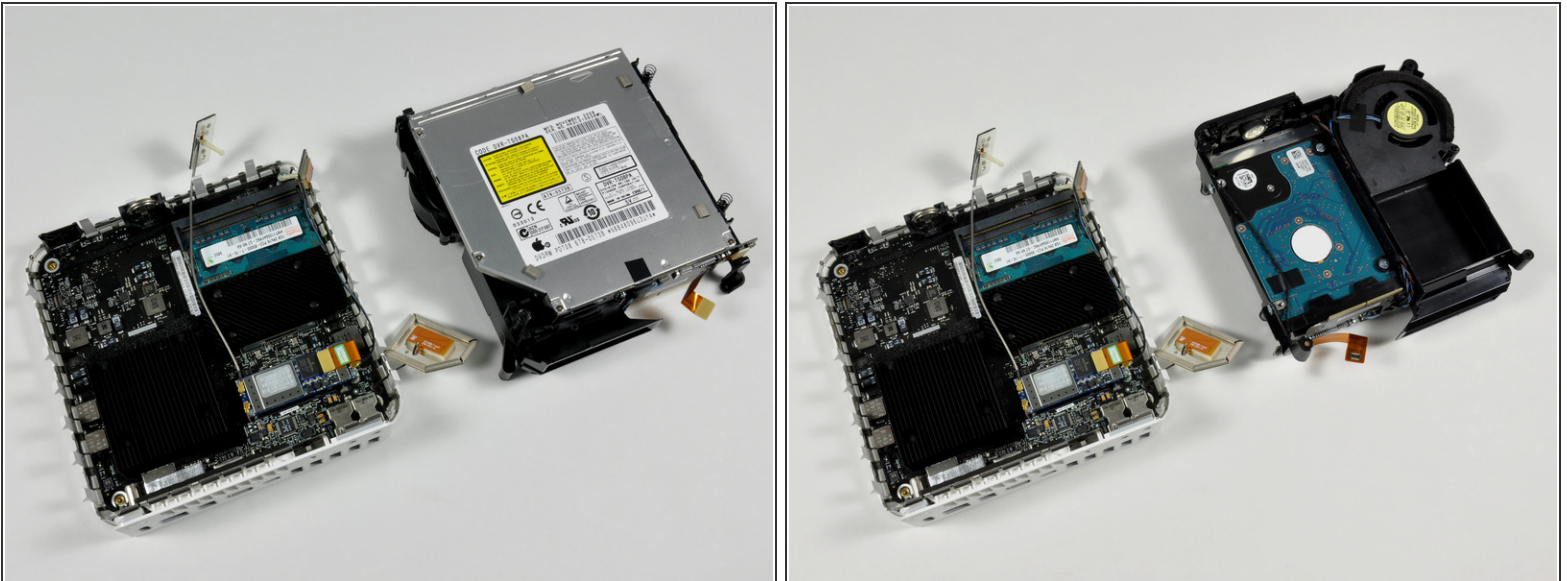


## Step 9



- Remove the four black Phillips screws holding the internal frame to the bottom housing.
- ❗ We spent a lot of time searching for these screws. Is this an Apple conspiracy to prevent consumers from disassembling their products? Put on your tinfoil hats!
- After the screws were removed, we separated the internal framework from the bottom housing.

## Step 10



- On the left we have the bottom housing, which includes the logic board, CPU, and RAM. On the right is the internal framework, which contains the SuperDrive, fan, and hard drive.

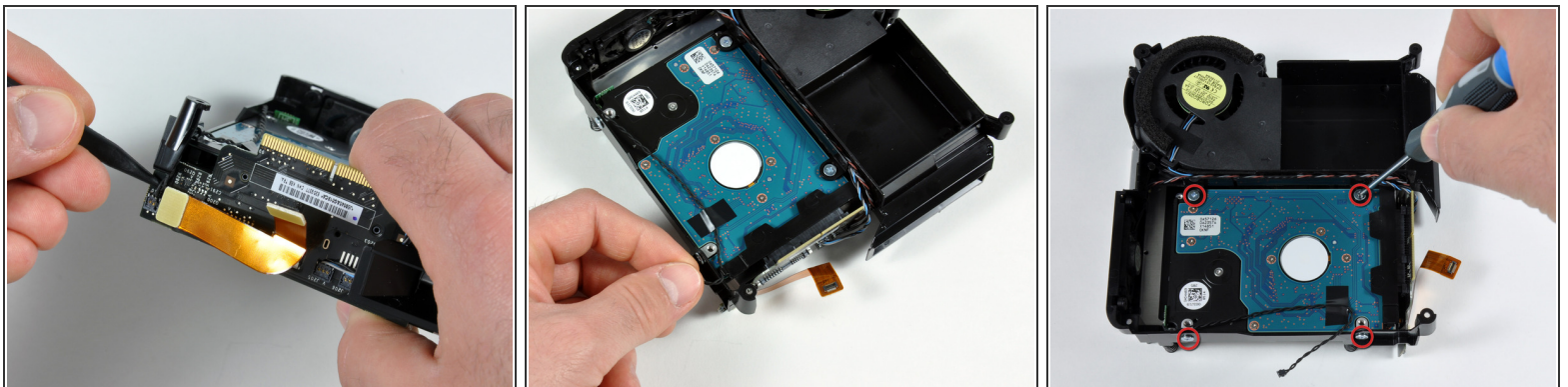



## Step 11




- Remove the six Philips screws from the left, right, and back sides of the SuperDrive.
- Unplug the drive from the interconnect board to completely remove it from the framework.

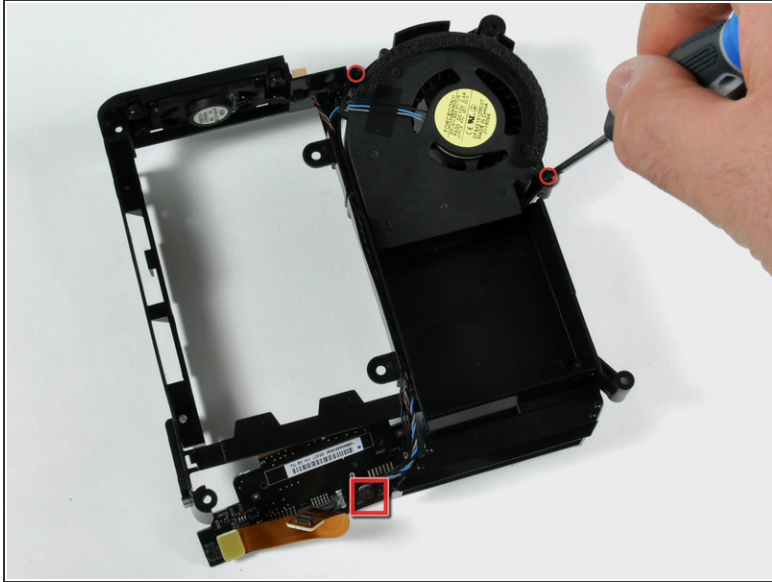
## Step 12



 Use the [Mac mini Terabyte Upgrade Guide](#) instead of this First Look to make any modifications to your mini.

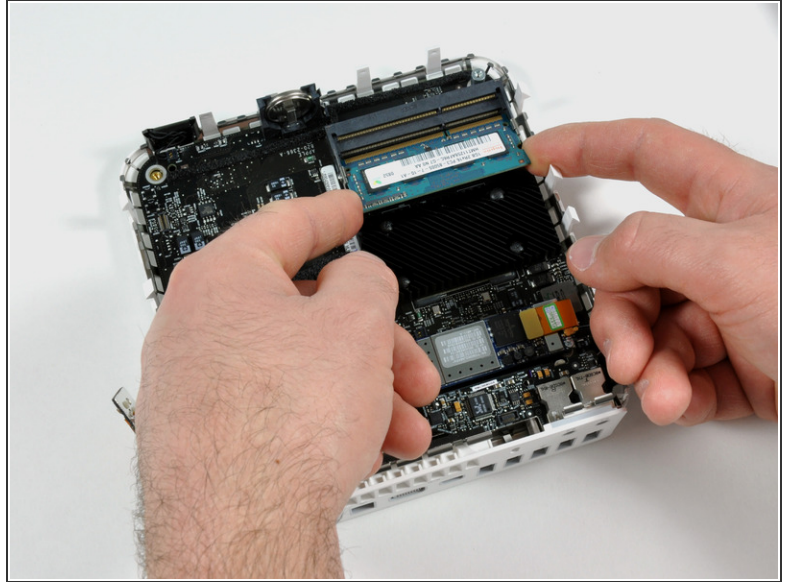
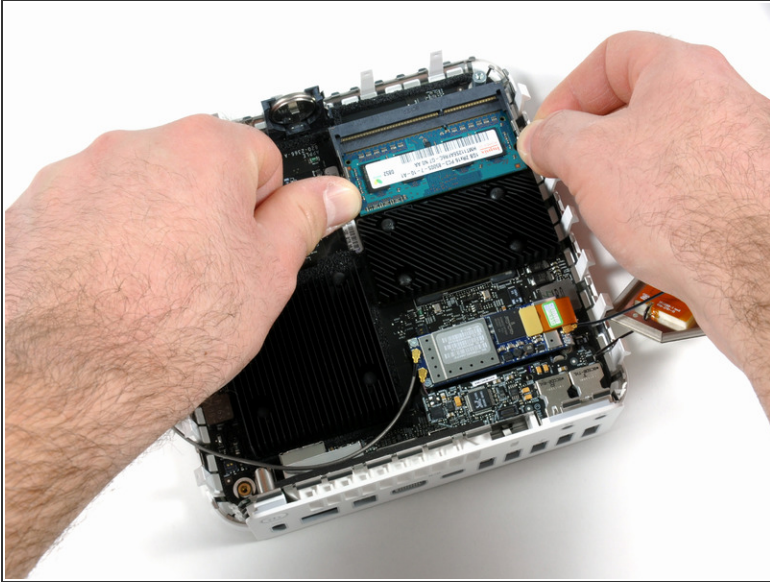
- Next, disconnect the small black two-wire connector from the interconnect board and move it out of the way.
- Remove the four Phillips screws securing the hard drive to the internal frame.
- The hard drive easily slides out once it is detached from the interconnect board.
- ✦ The hard drive is a paltry 120 GB. If you'd like to hold more than six photographs on your computer, you can [upgrade](#) to a 500 GB drive for just \$130 and a little time.
-  Apple only allows you to customize the mini with a 320 GB drive, and they want a whopping \$175!

## Step 13



- Remove the two screws holding the fan in place.
- Disconnect the fan's blue/gray cable from the interconnect board. This should allow the fan to be removed from the framework.
- The top half of the Mac mini is now completely disassembled!

## Step 14



- Now for the lower half...
  - The standard quick pry with the fingers (and subsequent pull) frees the RAM from the logic board.
- i** Our \$599 Mini shipped with only a single 1 GB PC3-8500 chip. In this configuration, the NVIDIA 9400M graphics processor allocated 128 MB of this memory as VRAM. When we installed a second chip in this machine, for a total of 2 GB, the 9400M automatically allocated 256 MB VRAM instead.

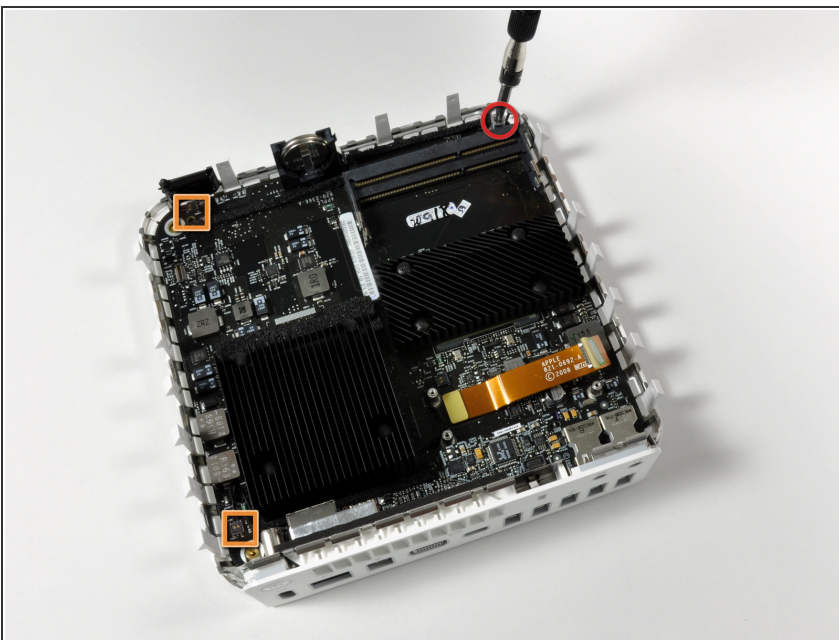


## Step 15



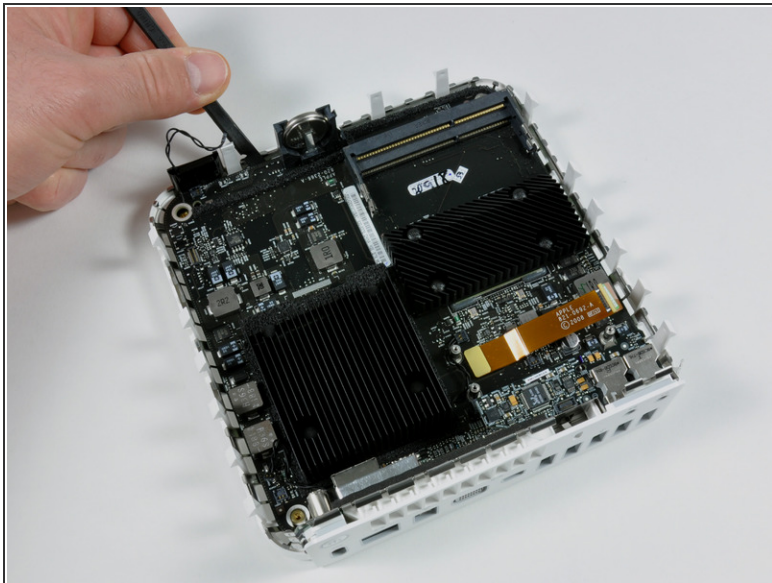
- On to the AirPort/Bluetooth board removal. A couple of steps are needed to remove the board:
  - Disconnect the three antennas (marked in red).
  - Disconnect the AirPort/Bluetooth communication cable (second photo).
  - Remove three Phillips screws (third photo) and then completely remove the AirPort/Bluetooth board.

## Step 16



- Once we had removed the AirPort/Bluetooth board, the only thing preventing us from taking out the logic board was two connectors and a T10 Torx screw.
- Disconnect the power button cable and the power-on LED.
- Use a T10 Torx screwdriver to remove the standoff screw.

## Step 17



- Use a spudger to gently pry up the logic board.
- Grasp the logic board with your hand and pull it away from the I/O ports.
- Voila! The logic board is free.

## Step 18



- All the goodies of the disassembly in one place. Taking apart the Mac mini was a lot simpler than the [iMac](#) we took apart yesterday.
- Putting the mini back together was easy too, it's running great. In fact, we've figured out how to add [one terabyte of internal storage](#) to our mini.
- We also did these [product teardowns](#) recently:
  - [iMac 20" disassembly](#)
  - [Kindle 2 disassembly](#)
  - [MacBook Pro 17" disassembly](#)
- Shameless plug: We sell both [Mac parts](#), [iPod parts](#), and [tools](#).